

WE CLAIM:

1. A radar antennae for motor vehicle applications, the antennae comprising:
 - a housing;
 - a radio frequency substrate disposed in said housing;
 - a supply network disposed on a first side of said radio frequency substrate;
 - a metallic ground surface disposed on a second side of said radio frequency substrate opposite said supply network, said metallic ground surface having an aperture;
 - a radiative surface firmly connected to said housing, said radiative surface excited by said supply network, via said aperture in said metallic ground surface, to radiate electromagnetic waves; and
 - a dielectric disposed between said ground surface and said radiative surface.
2. The radar antennae of claim 1, wherein said dielectric is air.
3. The radar antennae of claim 1, further comprising a reinforcing structure disposed between said ground surface and said housing, said reinforcing structure having a thickness defining a separation between said ground surface and said radiative surface.
4. The radar antennae of claim 3, wherein said reinforcing structure is disposed between said ground surface and a plane of said radiative surface.

5. The radar antennae of claim 3, wherein said dielectric is air and an air volume which serves as said dielectric is defined by an opening in said reinforcing structure, said opening disposed between said radiative surface and said ground surface.
6. The radar antennae of claim 1, wherein said radiative surface is disposed on a side of said housing facing said ground surface.
7. The radar antennae of claim 1, wherein said radiative surface is disposed on a side of said housing facing away from said ground surface.
8. A method for producing a radar antennae for motor vehicle applications, the method comprising the steps of:
 - a) disposing a radio frequency substrate in a housing;
 - b) disposing a supply network on a first side of said radio frequency substrate;
 - c) disposing a metallic ground surface at a second side of said radio frequency substrate opposite said supply network, said metallic ground surface having an aperture;
 - d) firmly connecting a radiative surface to said housing, said radiative surface excited by said supply network, via said aperture in said metallic ground surface, to radiate electromagnetic waves; and
 - e) disposing a dielectric between said ground surface and said radiative surface.
9. The method of claim 8, wherein said firm connection between said radiative surface and said housing is generated by pressing at least

one pre-fabricated metallic radiation surface onto said housing using a hot-stamping process.

10. The method of claim 8, wherein said firm connection between said radiative surface and said housing is generated by gluing at least one pre-fabricated metallic radiative surface to said housing.
11. The method of claim 8, wherein said firm connection between said radiative surface and said housing is generated by metallically coating at least part of said housing, wherein portions of said coating are subsequently removed through etching to define said radiative surface.
12. The method of claim 8, wherein said firm connection between said radiative surface and said housing is generated by metallically coating at least part of said housing, said radiative surfaces being subsequently cut out of said coating using a laser.